1170-36 **Performance of Cardiac Troponin I in the Exclusion of Myocardial Infarction in Patients With Advanced Renal Disease**

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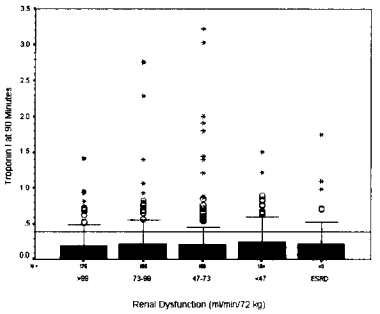
Background. Previous studies have demonstrated higher rates of false positive cardiac enzymes in patients with chronic renal disease who are evaluated for the presence of acute myocardial infarction (AMI).
Methods. Baseline renal function, and blinded determination of AMI by two cardiologists according to World Health Organization criteria were available for 808 patients in a prospective cardiac biomarker study. Patients, mean age 63.7, were evaluated in the emergency department for chest discomfort. Patients were stratified by corrected creatinine clearance into quartiles, and those with end-stage renal disease (ESRD) were considered as a fifth comparison group. Over 99% were admitted to a chest pain unit or hospital bed. The overall rate of myocardial infarction was 8.0%.
Results. At 90 minutes, using a bedside point-of-care measurement of cardiac troponin I (c-TnI), and a cut-off of 0.4 ng/ml, the negative predictive value was > 90% in all renal groups. There was no trend for higher rates of false positive c-TnI in those with renal dysfunction or ESRD who were ultimately determined not to have AMI (see figure).
Conclusion. Use of a point-of-care measurement of c-TnI at 90 minutes after presentation is robust to the presence of renal dysfunction and excludes AMI with satisfactory performance in a rapid cardiac triage protocol.



1170-37 **Heterogeneity of Infarct Sizing in Non-ST Segment Elevation Acute Coronary Syndromes: Results From the EARLY Pilot Trial**

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Background: Infarct size measurements have not been well described in patients with non-ST-segment elevation acute coronary syndromes (NSTE ACS).
Methods: Patients presenting with NSTE ACS enrolled in the EARLY Pilot Trial had serial creatine kinase(CK)-MB samples drawn at 0, 3, 6, 12, and 24 hours after randomization in the Emergency Department (ED) to early vs. delayed treatment with eptifibatide.
Results: Collection of cardiac marker samples began a median of 8.3 hours (25th, 75th percentiles: 5.4, 11.9 hours) after the onset of ischemic symptoms in the 311 patients studied. The median peak CK-MB was 8.6 ng/ml (2.0, 39.7) - CK-MB ULN = 7 ng/ml. A total of 112 patients (36%) had sufficient CK-MB elevation over 24 hours to determine curve-fitting parameters of infarct size. The remaining patients' CK-MB data could not be curve-fitted due to declining CK-MB values from the baseline sample (22%), no significant CK-MB elevation (36%), late CK-MB elevation (3%), or insufficient sampling (3%). The median CK-MB area-under-the-curve over 24 hours was 740.5 ug/min/L (200.5, 1871) in curve-fitted patients.

	Baseline	Peak
CK-MB 0-2X ULN	68.9%	60.8%
CK-MB 2-5X ULN	10.1%	12.7%
CK-MB > 5X ULN	21.0%	26.5%

Conclusions: Infarct size measurements demonstrate marked variability in patients with NSTE ACS reflecting the hetereogeneity of this population. Improved strategies of rapid risk stratification are needed for patients with NSTE ACS to quantify the risk of subsequent myocardial necrosis and guide therapeutic efforts to reduce infarct size.

POSTER SESSION

1171 Acute Coronary Syndromes: Risk Factors for Adverse Outcome

Tuesday, March 19, 2002, Noon-2:00 p.m.
Georgia World Congress Center, Hall G
Presentation Hour: 1:00 p.m.-2:00 p.m.

1171-28 **Is Left Ventricular Diastolic Function an Independent Determinant of Prognosis in Patients With an Acute Myocardial Infarction Treated with Thrombolysis?**

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Background: Recent studies have suggested that signs of left ventricular (LV) diastolic dysfunction may predict cardiac enlargement, and independently predict cardiovascular mortality after an acute myocardial infarction (AMI). However, the studies were small, which precludes generalization of the results.
Methods: 520 pts (mean age 64±11 (SD) ys, 77% males) participating in the ATTACC (ATTenuation by Adenosine of Cardiac Complications) study underwent a 2D and Doppler echocardiography 5±2 days after hospitalization for an ST elevation AMI, treated by thrombolysis. LV diastolic function was assessed by pulsed wave Doppler of the mitral inflow (E and A wave velocities, E/A ratio and E wave deceleration time). LV systolic function was assessed by wall motion score index (WMSi) and LV ejection fraction (EF). A sequential multistep multivariate regression analysis was used to assess long-term cardiovascular (CV) death, and the occurrence of the composite end-point of CV death or non-fatal AMI. In the first step only clinical variables (age, gender, previous AMI, hypertension, diabetes, cerebrovascular disease and smoking habits) were introduced in the model. In the second step, variables obtained during hospitalization (respiratory rate, heart rate and systolic blood pressure on admission, AMI localization by EKG and peak CK-MB isoenzyme value) were included. In the final step echocardiographic variables were introduced.
Results: During a mean follow-up of 2.6 (range 2.1 - 3.2) ys 58 CV deaths (11%) occurred and 124 pts (24%) reached the composite end-point of CV death or non-fatal AMI. WMSi and LV EF were lower (P<0.001) in patients who had an event (15 vs. 17 points, 0.36 vs. 0.44, respectively). However, all measures of LV diastolic function were similar in subjects who had a CV event and those who did not. In the final sequential multistep multivariate regression analysis only age (P<0.001), previous hypertension (P<0.001), WMSi (P=0.003), hypotension on admission (P=0.03) and diabetes (P=0.04) were independent predictors of CV death.
Conclusion: Only clinical variables and LV systolic function independently predicted CV death. LV diastolic function does not add prognostic information.

1171-29 **Is There a Gender Difference in the Risk of Arrhythmic Death After Acute Myocardial Infarction? An Insight From Contemporary Survival Studies**

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Background: Arrhythmic death is the commonest mode of death after acute myocardial infarction (AMI) but the role of gender on the risk of arrhythmic death after AMI is unknown. Methods: We pooled the individual data on 3105 placebo patient (2471M, median age: 65 (23-92)) from E.M.I.A.T., C.A.M.I.A.T., S.W.O.R.D., T.R.A.C.E. and D.I.A.M.O.N.D.-M.I. with LVEF<40% or frequent ventricular ectopics. Survival was measured from day 45 after MI to allow for different recruitment periods. Cox multiple regression was used. Results: Among the 3105 patients, there were 488 deaths by 2 years (220 arrhythmic death (AD) & 172 non-arrhythmic cardiac death (NAD)). After adjusted for significant variables associated with either AD or NAD (age, previous MI, hypertension, angina, systolic blood pressure, heart rate, NYHA class, LVEF & Q-wave), male patients were 1.7 times significantly more likely to die of AD than NAD compared to female patients (table). Female patients began with similar rates of AD and NAD but after first year, AD became the predominant mode of cardiac death. In contrast, AD remained higher than NAD in male patients at all time. Rates per 100 person-year at risk (AD: NAD): Up to 6 m (M= 7.48 : 5.06; F= 10.49 : 10.03); >6 - 12 m (M= 4.61 : 3.20; F= 1.96 : 3.92); >12-18 m (M= 4.41 : 3.37; F= 4.05 : 4.50); >18-24 m (M= 4.47 : 2.38; F= 1.07 : 4.27). Conclusion: Our study provides the first data that female gender appears protective against AD at 24 months after MI. Such data is vital when stratifying patients for antiarrhythmic therapy.

	Cause-specific 2-year incidence (%); AD:NAD	Ratio of relative hazard of AD:NAD; (95% CI)	P-value for interaction
M	9.1 : 6.2	1.74 (1.04-2.91)	0.03
F	7.2 : 9.5	1	